



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Raymond Browning, George Anwar, Ali Jabbari, and Lawrence A. Leske

Assignee: Tympany Corporation

Title: CONTROL SYSTEM

Application No.: 10/638,170 Filing Date: August 7, 2003

Examiner: Unknown Group Art Unit: 2644

Docket No.: M-15237 US

San Jose, California  
April 23, 2004

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P.O. Box 1450  
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**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR § 1.97(b)**

Dear Sir:

Pursuant to 37 CFR § 1.56, § 1.97 and § 1.98, the documents listed on the accompanying form PTO-1449 are called to the attention of the Examiner for the above patent application. Copies of these documents are enclosed with the exception of the U.S. patents, the publications cited on the form PTO-1449 at AQ, page 2; AQ and AR, page 5; and the copy is incomplete of the publication cited at AS, page 5.

Citation of these documents shall not be construed as:

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Signature of David W. Heid

Attorney for Applicants

4/23/04  
Date of Signature

Respectfully submitted,

Signature of David W. Heid

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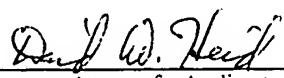
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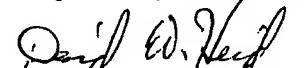
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Attorney for Applicants

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U.S. Department of Commerce, Patent and Trademark Office				Atty. Docket No.	Serial No.			
				M-15237 US	10/638,170			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Applicant(s)				
(Use several sheets if necessary)				Raymond Browning et al.				
				Filing Date	Group			
				August 7, 2003	2644			
U.S. Patent Documents								
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
	AA	US 3,530,244	09/22/1970	Reiffin				
	AB	US 4,243,839	01/06/1981	Takahashi et al.				
	AC	US 4,335,274	06/15/1982	Ayers				
	AD	US 4,573,189	02/25/1986	Hall				
	AE	US 5,191,618	03/02/1993	Hisey				
	AF	US 5,408,533	04/18/1995	Reiffin				
	AG	US 5,542,001	07/30/1996	Reiffin				
	AH	US 5,588,065	12/24/1996	Tanaka et al.				
	AI	US 5,694,476	12/02/1997	Klippel				
	AJ	US 5,815,585	09/29/1998	Klippel				
	AK	US 6,005,952	12/21/1999	Klippel				
Foreign Patent Documents								
							Translation	
		Document	Date	Country	Class	Subclass	Yes	No
	AL							
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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
,	AQ	Bright, A., "Compensating Non-Linear Distortion in an 'Equal-Hung' Voice Coil," Audio Engineering Society, Convention Paper 5411, Presented at the 111 <sup>th</sup> Convention, New York, NY, USA, September 21-24, 2001, pp. 1-8						
,	AR	Busbridge, S.C., et al., "Crossover Systems in Digital Loudspeakers," Audio Engineering Society, Convention Paper 5305, Presented at the 110 <sup>th</sup> Convention, Amsterdam, The Netherlands, May 12-15, 2001, pp. 1-7						
,	AS	Kaoru, A. and Shogo, K., "Detection threshold for tones above 22 kHz," Audio Engineering Society, Convention Paper 5401, Presented at the 110 <sup>th</sup> Convention, Amsterdam, The Netherlands, May 12-15, 2001, pp. 1-4						
Examiner		Date Considered						
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.</p>								

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## U.S. Patent Documents

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	AA	US 6,058,195	05/02/2000	Klippel			
	AB	US 6,104,817	08/15/2000	Ding			
	AC	US 6,122,385	09/19/2000	Konno et al.			
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	AF						
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## Foreign Patent Documents

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	AQ	Klippel, W., "Adaptive Nonlinear Control of Loudspeaker Systems," <i>J. Audio Eng. Soc.</i> , Vol. 46, No. 11, (1998), pp. 939-954
	AR	Klippel, W., "Nonlinear Adaptive Controller for Loudspeakers with Current Sensor," <i>Audio Engineering Society, Convention Paper 4864</i> , Presented at the 106 <sup>th</sup> Convention, Munich, Germany, May 8-11, 1999, pp. 1-18
	AS	Klippel, W., "Diagnosis and Remedy of Nonlinearities in Electrodynamical Transducers," <i>Audio Engineering Society, Convention Paper 5261</i> , Presented at the 109 <sup>th</sup> Convention, Los Angeles, CA, USA, September 22-25, 2000, pp. 1-48

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	AQ	Klippel, W., "Fast and Accurate Measurement of Linear Transducer Parameters," Audio Engineering Society, Convention Paper 5308, Presented at the 110 <sup>th</sup> Convention, Amsterdam, The Netherlands, May 12-15, 2001, pp. 1-8						
	AR	Klippel, W., "Speaker Auralization – Subjective Evaluation of Nonlinear Distortion," Audio Engineering Society, Convention Paper 5310, Presented at the 110 <sup>th</sup> Convention, Amsterdam, The Netherlands, May 12-15, 2001, pp. 1-8						
	AS	Klippel, W., "Prediction of Speaker Performance at High Amplitudes," Audio Engineering Society, Convention Paper 5418, Presented at the 111 <sup>th</sup> Convention, New York, NY, USA, September 21-24, 2001, pp. 1-14						
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## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	AQ	Klippel GmbH, Klippel Analyzer System, Introductory Report, Large Signal Identification (LSI), HTML Report, July 5, 2002, pp. 1-17
	AR	Mazin, V., "Modeling of Magnetic Hysteresis and its Influence on Harmonic Distortion in Electrodynamic Loudspeakers," Audio Engineering Society, Convention Paper 4865, Presented at the 106 <sup>th</sup> Convention, Munich, Germany, May 8-11, 1999, pp. 1-16
	AS	Mihelich, R., "Loudspeaker Nonlinear Parameter Estimation: An Optimized Method," Audio Engineering Society, Convention Paper 5419, Presented at the 111 <sup>th</sup> Convention, New York, NY, USA, September 21-24, 2001, 1 p. (Abstract)

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	AQ	Schurer, H., et al., "Theoretical and Experimental Comparison of Three Methods for Compensation of Electrodynamic Transducer Nonlinearity," <i>J. Audio Eng. Soc.</i> , Vol. 46, No. 9, September 1998, pp. 723-739						
	AR	Suykens, J., et al., "Feedback Linearization of Nonlinear Distortion in Electrodynamic Loudspeakers," <i>J. Audio Eng. Soc.</i> , Vol. 43, No. 9, September 1995, pp. 690-694						
	AS	Teixeira, V., et al., "Study of loudspeaker electromechanical nonlinearities and their compensation," Presented at the International Conference on Signal Processing Applications and Technology (ICSPAT), Boston, Massachusetts, USA, October 7-10, 1996, pp. 321-325						
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/	AQ	Thiele, N., "Loudspeaker Crossovers With Notched Responses," Audio Engineering Society Convention, Convention Paper 5419, Presented at the 108 <sup>th</sup> Convention, Paris, France, February 19-22, 2000, pp. 1-21						
.	AR	Thiele, N., "Phase Considerations in Loudspeaker Systems," Audio Engineering Society, Convention Paper 5307, Presented at the 110 <sup>th</sup> Convention, Amsterdam, The Netherlands, May 12-15, 2001, pp.1-13						
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